REMARKS

Reconsideration and allowance of the subject application is respectfully requested.

Claims 1, 2, 4, 6, 26, 29, 31 to 33, 37 and 38 have been amended. New claims 39 to 50 have been added. Claims 1 to 50 now stand in the subject application. Claims 1, 26, 32 and 37 to 39 are independent.

In the Official Action, the Examiner has rejected claims 1, 2, 32, 33, and 37 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,424,752 to Katayama et al. ("Katayama"). Claims 3 to 8 have been rejected under 35 U.S.C. §103(b) as being unpatentable over Katayama in view of U.S. Patent No. 6,359,617 to Xiong ("Xiong"). Claims 26 to 31, 34 to 36 and 38 have been rejected under 35 U.S.C. §102(b) as being anticipated by Xiong. Applicants thank the Examiner for identifying allowable subject matter in claims 9 to 25. Applicants however, respectfully submit that the Examiner's objections in view of the cited references are no longer appropriate for the reasons set forth below.

According to the Applicants' invention as defined by independent claim 1, Applicants provide a method of creating a panorama image from a series of source images comprising registering adjoining pairs of images in the series by comparing and determining ***common discrete features corresponding to high curvature points*** within the adjoining pairs of images and estimating a transform between each adjoining pair of images using the determined common features. Each image is projected onto a designated image in the series using the estimated transforms associated with the image and with images between the image and the designated image. Overlapping portions of the projected images are combined to form the panorama image.

In contrast, Katayama discloses an an image synthesis apparatus, for synthesizing a plurality of images to generate a synthesis image. The apparatus selects two or more images from among a plurality of images, and stores image information for the selected images. The stored image information is employed to generate coordinate transformation parameters that are used to set a positional relationship for the selected images before the images are synthesized to obtain a single image. The generated coordinate transformation parameters are changed

using as a reference, a position location for an arbitrary image selected from among the plurality of images. In order to register images, a template matching method is employed. During template matching at least two segments of one image are used to serve as templates that are shifted within a search area of the other image until matches are detected.

As will be appreciated, Katayama does not teach or suggest the Applicants' invention as claimed. Katayama does not register adjoining pairs of images in the series by comparing and determining **common discrete features corresponding to high curvature points** within the adjoining pairs of images. Accordingly, Applicants respectfully submit that independent claim 1 distinguishes patentably over Katayama. Xiong does not remedy the deficiencies of Katayama.

Xiong discloses a method for use in virtual reality environments to create a full 360-degree panorama from multiple overlapping images. The overlapping images are registered using a combination of a gradient-based optimization method and a correlation-based linear search. Parameters of the images are calibrated through global optimization to minimize the overall image discrepancies in overlap regions. The images are then projected onto a panorama and blended using Laplacian pyramid blending with a Gaussian blend mask generated using a grassfire transform to eliminate misalignments.

As the Examiner will appreciate, Xiong simply does not register images by comparing and determining common features in the images and certainly does not register the images by comparing and determining common discrete features corresponding to high curvature points within the images. Accordingly, Applicants respectfully submit that independent claim 1 and the claims dependent thereon, distinguish patentably over Katayama either alone or in combination with Xiong and should be allowed.

Independent claims 32 and 37 recite subject matter analogous to that recited in independent claim 1. Accordingly, Applicants respectfully submit that these claims and the claims dependent thereon, distinguish patentably over the cited references for the same reasons set forth above and should be allowed.

According to the Applicants' invention as defined by independent claim 26, Applicants provide a method of creating a panorama image from a series of source

images comprising the steps of registering matching corners in each adjoining pair of images in the series and using the registered matching corners to estimate transforms detailing the transformation between each adjoining pair of images. The transforms are then re-estimated using non-moving pixels in the adjoining pairs of images. Selected transforms are multiplied to project each image onto the center image of the series and the projections are error corrected using the registered matching corners. The overlapping regions of the projected images are frequency blended to yield the panorama image.

As mentioned above, Xiong simply does not register images based on matching corners in the images, use the matching corners to estimate transforms, re-estimate the transforms using non-moving pixels and error correct the projections using the matching corners. Rather, Xiong registers images using a combined gradient-based optimization method and correlation-based linear search. Accordingly, Applicants respectfully submit that independent claim 26 and the claims dependent thereon, distinguish patentably over Xiong and should be allowed.

Independent claim 38 recites subject matter analogous to that recited in independent claim 26. Accordingly, Applicants respectfully submit that this claim distinguishes patentably over the cited references for the same reasons set forth above and should be allowed.

New independent claim 39 recites a method of registering images having overlapping content and incorporates the subject matter of allowable claim 9. Accordingly, Applicants respectfully submit that this claim and the claims dependent thereon distinguish patentably over the cited references.

In view of the above, it is believed the application is in order for allowance and action to that end is respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach Applicant's attorney David Ruston (34,495) at (416) 595-1155.

<div style="text-align: center">Respectfully submitted,</div>

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